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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/484,612 | 01/18/2000 | Joanna Qun Zang | CISCP130/1343 | 9893 |

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| EXAMINER |
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BAYARD, EMMANUEL

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| ART UNIT | PAPER NUMBER |
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2631

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,612

Applicant(s)

ZANG ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>20040712</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is in response to amendment filed on 7/12/04 in which claims 1-59 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17, 25-33 and 38-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebsgaard et al U.S. patent No 6,760,316 B1 in view of Fijolek et al U.S. patent No 6,553,568 B1.

Referring to claims 1, 25, 39, 44, 51 and 58, Hebsgaard discloses a method of providing backup service to a group of cable modems comprising: receiving information regarding the status of the group of modems from the master CMTS is functionally equivalent to the claimed (working CMTS) (see fig.3 element 22) to thereby synchronize (see fig.3 element 30) the slave CMTS is functionally equivalent to the claimed (protecting CMTS) (see fig.3 element 24) to the master (working) CMTS in response to a change in configuration data pertaining to the group of cable modems associated with the working CMTS (see abstract and col.2, lines 28-56 and col.5, lines 1- 20).

However Hebsgaard does not teach determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems.

Fijoleck et al teaches determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems (see 16, lines 63-67 and col.17, lines 1-10).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Filojeck into Hebsgaard as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claims 2, 26, 33, 40, 52 Hebsgaard does teach receiving information involves receiving a synchronization message from the working device (see abstract).

As per claims 3, 41 Hebsgaard does teach that the synchronization message includes MAC and IP addresses of the group of cable modems (see col.1, line 50 and col.2, line 27).

As per claims 4, 42 Hebsgaard would include DOCSIS parameters as to provide sufficient data rate to each user in order to establish accurate synchronization between the CMTS.

As per claims 5, 27 Hebsgaard does teach updates the database of the CMTS (see col.9, lines 56-57).

As per claims 6, 28, 43, 53 Hebsgaard and Fijoleck would teach prior to receive information about the status of the cable modems, becoming available to take over service from the master (working) CMTS wherein the information about the status of the group modems

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includes an entire set of synchronization data as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojek (see col.17, lines 1-5).

As per claim 7, Hebsgaard et al teaches receiving information regarding the status of the group of modems from the master CMTS is functionally equivalent to the claimed (working CMTS) (see fig.3 element 22) to thereby synchronize (see fig.3 element 30) the slave CMTS is functionally equivalent to the claimed (protecting CMTS) (see fig.3 element 24) to the master (working) CMTS wherein receiving information about the status of the group of cable modems comprises receiving a portion of synchronization data for the group of cable modems and wherein the portion of synchronization data comprises data has change since a previous synchronization (see abstract and col.2, lines 28-56 and col.5, lines 1- 20).

However Hebsgaard does not teach determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems.

Fijolek et al teaches determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems (see 16, lines 63-67 and col.17, lines 1-10).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Filojek into Hebsgaard as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojek (see col.17, lines 1-5).

As per claims 8, 12, 14, 29, 32, 46 and 54 Hebsgaard et al teaches receiving information regarding the status of the group of modems from the master CMTS is functionally equivalent to the claimed (working CMTS) (see fig.3 element 22) to thereby synchronize (see fig.3 element

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30) the slave CMTS is functionally equivalent to the claimed (protecting CMTS) (see fig.3 element 24) to the master (working) CMTS wherein the slave (protecting) CMTS provides downstream messages receiving to the group of cable modems on the same downstream channel as used by the master (working) CMTS to provide service to group of cable modems (see abstract and col.2, lines 4-10 and col.7, lines 35-40).

However Hebsgaard does not teach determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems.

Fijoleck et al teaches determining that the slave (protecting) CMTS is to take over service to the group of cable modems and taking over service to the group of cable modems (see 16, lines 63-67 and col.17, lines 1-10).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Filojeck into Hebsgaard as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claim 9, Hebsgaard et al teaches provides service to a second group of cable modems from the Slave (protecting) CMTS (see abstract).

As per claim 10, Hebsgaard teaches the Slave (protecting) CMTS does not provide service to a second group of cable modems (see abstract and col.7, lines 1-67)

As per claim 11, Hebsgaard and Fijoleck in combination would teach determining that the protecting device is to take over comprises determining that the working device is not providing signals to a designated node as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claim 13, Hebsgaard and Fijoleck in combination would teach determining that the protecting device is to take over service comprises receiving notification that "working" device is no longer sending notifications as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claim 15, Hebsgaard et al teaches the working and protecting devices are separate interfaces (see fig.3).

As per claim 16, Hebsgaard and Fijoleck in combination would teach that switching between the working device and the protecting device does not require changing the settings of the terminals as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claim 17, Hebsgaard and Fijoleck in combination would teach sending synchronization information regarding the group modems to the working CMTS after the protecting CMTS takes over service as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claims 30, 57, Hebsgaard and Fijoleck in combination would teach the instructions for providing service to a second group of cable modems as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claims 31, 45, 55 Hebsgaard and Fijoleck in combination would teach the instructions for providing service to a second group of cable modems and determining that the protecting device is to take over as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Filojeck (see col.17, lines 1-5).

As per claim 38 Hebsgaard and Fijoleck in combination would teach a message indicate that the working CMTS wishes a protecting CMTS to take over service as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Fijoleck (see col.17, lines 1-5).

As per claims 47, 49, 56 Hebsgaard and Fijoleck in combination would teach notifying the protecting device comprises sending a switch request message to the protecting device as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Fijoleck (see col.17, lines 1-5).

As per claim 48, Hebsgaard teaches that the working and protecting devices are separate CMTS interfaces (see generally fig.3).

As per claim 50 Hebsgaard and Fijoleck in combination would teach receiving synchronization regarding the group cable modems from the protecting CMTS after discontinuing service as for a monitor to determine when a switchover between the active and stand-by units is necessary as taught by Fijoleck (see col.17, lines 1-5).

As per claim 59 Hebsgaard and Fijoleck in combination would teach a wireless network as to provide the system with greater range of quality signal.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an

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international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 18-24, 34-37 are rejected under 35 U.S.C. 102(e) as being anticipated by

Hebsgaard et al U.S. patent No 6,760,316 B1.

As per claims 18, 22, 24, 34 and 37 Hebsgaard et al teaches discloses an apparatus capable of acting as a protecting device for a cable network upon failure of a working device comprising: a processor (see fig. 3 element 3111) and a register is known as to perform the same function as the claimed (memory) (see fig.7 element 308 and col.9, line 45) where at least one of the processors and the memory are configured to receive and store synchronization data from the master CMTS is the same as the claimed (working CMTS) (see fig.3 element 22) in response to a change in configuration data pertaining to the group of cable modems associated with the master (working) CMTS or discovery of a slave CMTS is the same as the claimed (new protecting CMTS) (see fig.3 element 24) the synchronization data specifying information about the group of cable modems (see abstract and col.2, lines 28-56 and col.5, lines 1- 20).

As per claims 19, 35-36 Hebsgaard does teach a complete CMTS or a portion of a CMTS (see fig.3).

As per claim 20, Hebsgaard does teach a line card (see col.3, line 13).

As per claim 21, Hebsgaard does teach and 23, the processors and memory configure to receive synchronization message at a specifying address (see abstract and col.2, lines 28-56 and col.5, lines 1- 20).

As per claim 23, Hebsgaard et al teaches at least one processors and memory are configured to take over responsibility (see abstract)

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

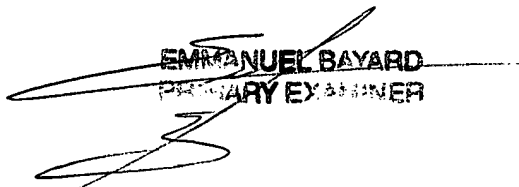
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard
Primary Examiner
Art Unit 2631

9/14/04


EMMANUEL BAYARD
PRIMARY EXAMINER